DELAWARE CENTER FOR THE INLAND BAYS

Inland Bays Journal

FALL | WINTER 2021

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The Inland Bays Journal is a publication of the Delaware Center for the Inland Bays. The Center is a nonprofit organization and a National Estuary Program. The purpose of the Inland Bays Journal is to educate and inspire people about this estuary of national significance and its restoration.

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Cover photo: A past snowstorm covers the boardwalk at the James Farm Ecological Preserve, which will be undergoing many upgrades in the coming years. Photo by Dennis Bartow.

Partners Plan a Pathway to Better Bays

When the Center for the Inland Bays was created nearly three decades ago, the watershed of this nationally significant estuary was home to fewer than 125,000 residents. Now, the number of people who live, work, and play here has more than doubled. With that influx of interest also comes a responsibility to ensure our mission to preserve, protect, and restore the Bays is successful.

Over the years, the Center has planted saplings to bring forests to former fields, protected shorelines in vulnerable areas, and launched efforts to restore one of the region's most iconic and economically important residents: the American oyster.

That work across the watershed was made possible by a plan, one that relies on partnerships between private and public entities, with input and investment from communities, governments, and lawmakers. The first Comprehensive Conservation and Management Plan (CCMP) in 1995 offered us the very first blueprint to improve water quality, habitat, and the overall prosperity of the Bays that are at the heart of our area's economy.

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From the Director

Planning for a Better Future

In 1972, the United States Congress passed the most important environmental law in our country's history, the Clean Water Act, with a nearly unanimous vote. Congress acted decisively in response to powerful waves of public outrage over severely polluted waters. These atrocities included 10 to 20 pounds of mercury a day being dumped into the Detroit River, the Potomac acting as an open sewer for D.C., and an area of the Delaware River so devoid of oxygen that fish were unable to swim upstream past Wilmington. The public was so insistent on prioritizing clean water that when President Richard Nixon attempted to veto the law, he was immediately and overwhelmingly overridden by the vast majority of Congress. The law has since been extraordinarily successful in cleaning up the nation's waters, keeping billions of pounds of pollution out of them every year.

Fifteen years after the passage of the Act, its landmark 1987 amendments established the National Estuary Program (NEP) to restore estuaries along the coasts of the U.S. Unlike traditional regulatory approaches to environmental protection, the NEP targets a broad range of issues and engages local communities in the process. The program focuses not just on improving water quality in an estuary, but on maintaining the integrity of the whole system — its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values.

The Center for the Inland Bays is proud to be one of 28 National Estuary Programs. The successes that we have experienced in organizing representatives from the federal, state, and local agencies responsible for managing the estuary's resources, as well as business leaders, educators, and researchers, has been replicated across the country. This effort is a model of community collaboration that uses science to innovatively solve environmental problems. And at the heart of every estuary program is a good plan.

I am pleased to share with you in this edition of the Inland Bays Journal highlights from our first revision of the Comprehensive Conservation and Management Plan for the Inland Bays. This is the blueprint for how we can restore clean waters that support an abundance and diversity of fish and wildlife while we adapt to a rapidly changing climate. The plan was created with direct public input and the commitments of the plan's signatories that include Sussex County, the Delaware Departments of Agriculture and Environmental Control and Natural Resources, and the Citizens Advisory Committee. And it comes at a perfect time, when Congress has doubled the authorized funding for the National Estuary Program and on the heels of the state's historic commitment to clean water funding.

Thank you to all of the supporters who have made this plan possible. By working together to make the plan a reality, we will restore the promise and abundance of these beautiful and beloved waters.

Chris Bason
Executive Director

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DE Center for the Inland Bays

(James Farm): James Farm Ecological Preserve

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Left: Center board members show their support for the James Farm Ecological Preserve during the 2021 Decked Out fundraiser. Photo by Matt Sprague.

Below left: During the pandemic, the James Farm Ecological Preserve has offered respite to visitors and showcased the importance of engaging with the outdoors.

Below right: Delaware Department of Agriculture Secretary Michael Scuse, left, joins Center Executive Director Chris Bason at the 2021 Decked Out. Photo by Matt Sprague.

To read the 2021 CCMP, go to inlandbays.org/ccmp or visit our office to request a hard copy.

(continued from page 1)

As we see tides wash over the roads in Oak Orchard and record-breaking temperature trends year after year, we know that climate change and sea-level rise will continue to present challenges. Luckily, many Americans have a heightened awareness for the importance of addressing climate change and protecting these beautiful natural places we call home, according to recent polls by the Pew Research Center.

If we work together, the Center can play a role in leading our coastal communities into a future where the Indian River doesn't suffer from algal blooms and fish kills every summer, a future where diamondback terrapins and horseshoe crabs have the habitat they need to reproduce, and a future that we're proud to leave to our children and grandchildren.

But to get there, we need another solid plan, one that seriously anticipates new threats from a changing climate and the compounding challenges of water pollution from the surrounding landscape.

It has taken hundreds of hours of collaborative work with these residents as well as businesses, community leaders, elected officials, scientists, and government representatives to unveil a fully updated, forward-looking CCMP in 2021. The 84-page document will guide our work over the next 10 years, but we don't expect all Bay-lovers to dive that deeply.

So we've pulled a few highlights to illustrate how we'll be making an impact on land, water, and in our diverse communities.

Continuing this collaborative spirit through the work we do on the water, land, and in educating future generations of Bay stewards will make this plan a success. Each and every one of us has a role to play in saving our beautiful Bays, whether that's providing technical support, volunteer hours, or even just a few dollars a month by donating to our annual appeal.

However you choose to support our work toward cleaner, healthier Bays, it's time to get on board with us and get to work.

"Southern Delaware is changing at a rapid rate, but I see so much potential for collaboration and really important conservation work that will leave a legacy for generations to come," Bason said. "I'm looking forward to the successes I know we can all achieve in the coming years."

Lending the Land a Helping Hand

From the western edge of our watershed to the Indian River Inlet and beyond, what we do on land has a ripple effect. Connecting one patch of woods to another through conservation or reforestation is beneficial not only to the wildlife searching for food and shelter, but also to the wellbeing of residents, the tourism economy of Delaware, and the health of our communities nearby and downstream. We cannot stop with the 157 acres the Center has already successfully reforested since 1995.

Protecting a few acres of forest in Angola Neck along Rehoboth Bay or a few acres of wetlands along Route 54 is incredibly important. However, nothing compares to investing in open space programs at the county and state levels to protect entire regions.

"The changing landscape is one of the easiest transformations to observe in the watershed. I think most, if not all, people have had a moment where they don't recognize the landscape," said Michelle Schmidt, the Center's Watershed Coordinator. "We know too well the shock of 'Wow, this used to be all open field.' We need to protect the natural beauty left in our watershed, and we have a plan to do just that."

Below left: Volunteers like Steve Tollefson and Dick Belanger, shown here, are essential to implementing the CCMP.

Above center: Volunteers like those who participated in the 2021 Annual Inland Bays Clean Up, shown here, are essential to implementing the CCMP. Photo by J&J Photography.

Above right: Restoring uplands helps to protect water quality downstream.

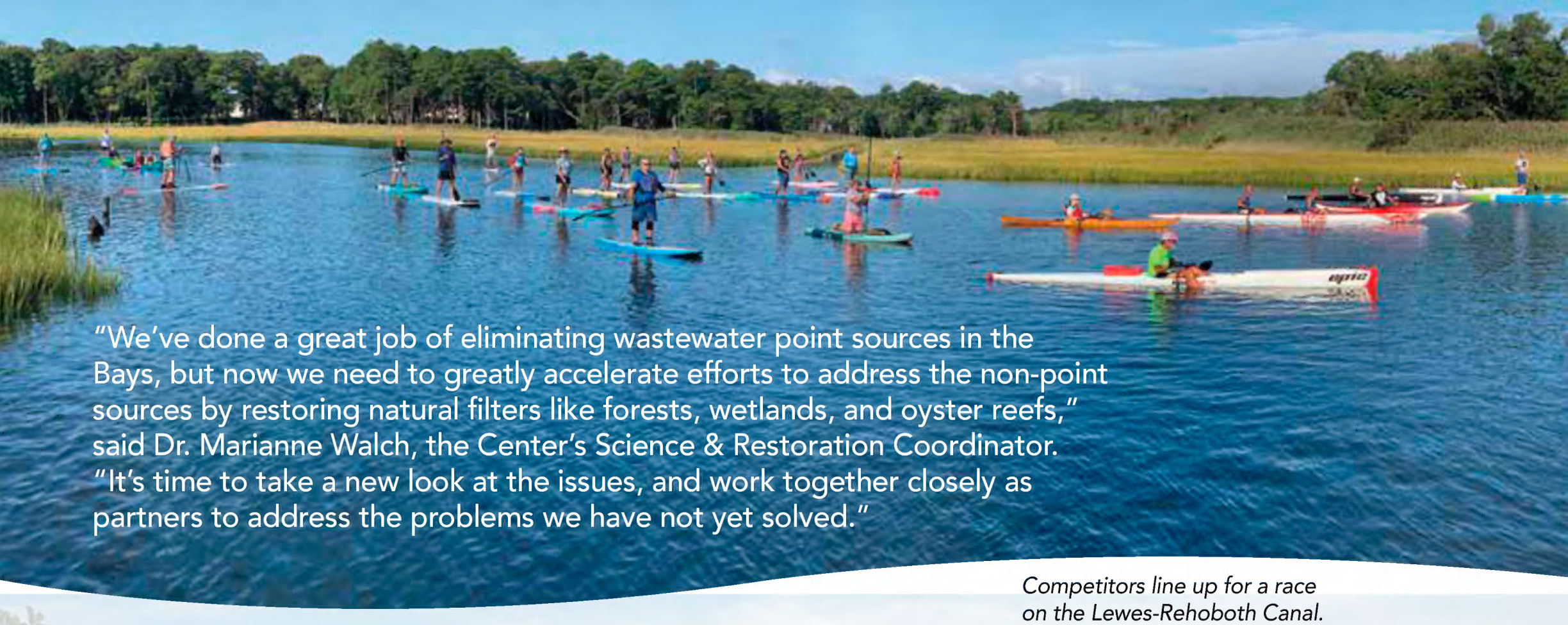
We envision the Sussex County Conservation Partnership formed in 2020, which has already led to the preservation of dozens of coastal acres, to be the beginning of a beautiful conservation journey supported by the latest CCMP.

"Sussex County has a long history of partnerships, working with organizations like the Center for the Inland Bays to protect a shared quality of life that residents and visitors alike enjoy each day," County Council President Michael H. Vincent said. "It's through those efforts, working together, that we can ensure what is special about Sussex County today — its natural beauty and rich environmental value — will still be here, utilized and treasured by the generations that follow us, in the decades to come."

As climate change drives stronger storms and heavier rainfalls into our area, which happens to be in a Mid-Atlantic hotspot for sea-level rise, properly managing stormwater and runoff in our watershed is paramount. That's why the CCMP calls for a comprehensive coastal flood monitoring system, tracking the nutrient pollution coming from an increasing amount of wastewater, and expanding monitoring efforts to see how impacts like ocean acidification are impacting our Bays.

Reducing pollution from our increasingly developed landscape is the only way to improve water quality in the Inland Bays and its tributaries. More fish kills were reported in the Inland Bays in 2021 than have been reported in decades. Advocating for less fertilizer use and taking septic systems offline, setting a limit for wastewater inputs that impact our water and lands, and developing a habitat plan to protect these invaluable ecosystems — all projects prescribed by this new CCMP — could help turn the tide on that unfortunate trend.

Wading Toward MEANINGFUL SOLUTIONS



"We've done a great job of eliminating wastewater point sources in the Bays, but now we need to greatly accelerate efforts to address the non-point sources by restoring natural filters like forests, wetlands, and oyster reefs," said Dr. Marianne Walch, the Center's Science & Restoration Coordinator. "It's time to take a new look at the issues, and work together closely as partners to address the problems we have not yet solved."

Competitors line up for a race on the Lewes-Rehoboth Canal.

As we think about how activities on land impact our waterways, we must celebrate how far we've come and gear up for the work that's still ahead.

We have eliminated or mitigated all direct sources of pollution to the estuary. That means all but one of the 13 pipes that once discharged treated wastewater from places like the Rehoboth Beach Wastewater Treatment Plant are no longer in use. Despite this success, however, far less progress has been made in addressing harder-to-trace sources of nutrient pollution from agricultural and developed lands.

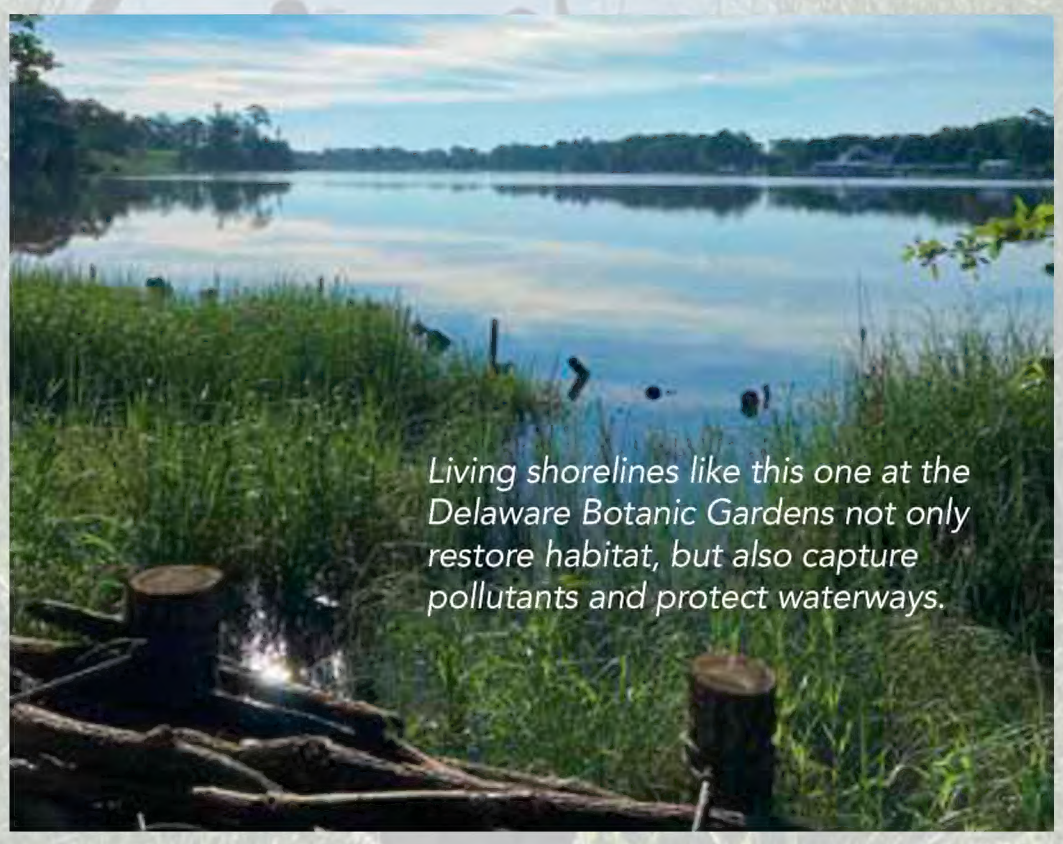
This type of pollution, which includes water flowing off the land due to rain or irrigation or groundwater tainted by contaminants from septic systems or fertilizers, is challenging to confront because it requires a massive amount of funding to address a problem largely coming from private lands. But with more monitoring guided by our new CCMP, we can get a better handle on the problem and find potential solutions.

Monitoring provides the data needed to inform our restoration efforts, helping us hone in on the areas most in need of our help. The continuous water quality monitoring that our new CCMP calls for (and that was featured in the Spring/Summer 2021 Inland Bays Journal) will give us a clearer picture of what's really going on beneath the surface. The CCMP also calls for a new habitat plan, which will develop new goals needed to address the threats our beloved coastal wildlife, like Great blue herons and Delmarva fox squirrels, face due to impacts on their habitat.

Partnerships also propel efforts to monitor and address these issues. Over the next decade, the Center will continue working with state agencies and universities to monitor and develop models for these vastly complex aquatic issues. But the Bays also rely on everyday residents, visitors, and volunteers to do their part, which includes getting involved in the Center's successful and growing citizen science programs.

"Volunteers can become the eyes and ears of the water bodies and notice things that may be missed in infrequent, routine professional surveys," said Ed Whereat, Program Coordinator of the Citizen Monitoring Program at the University of Delaware (UD).

Allowing people easier access to these spaces is also a key element in the CCMP, in order to grow stewardship for the Bays. But as of now, many tributaries of the Bays are unsafe for swimming and some, like the Indian River, are so stressed that they are struggling to support the life that depends on them.



Living shorelines like this one at the Delaware Botanic Gardens not only restore habitat, but also capture pollutants and protect waterways.

Fostering the Future

How Education and Engagement Can Help Save the Bays

Increasing our monitoring and stewardship for land and water relies on expanding how many people have access to these incredible spaces, like the James Farm Ecological Preserve on Indian River Bay.

Our new CCMP prioritizes the importance of environmental education and low-impact recreation and water access, such as kayak launches, to help residents and visitors of all ages engage with the estuary. Those personal experiences—when someone sees a horseshoe crab for the first time or paddles a local waterway by kayak—create future environmental stewards.

Just like partnerships drive conservation and research efforts on land and water, so can they advance environmental education. Over the past year, the Center has led an effort to bring together environmental, educational, and community-based organizations across the First State. Collectively, more than a dozen organizations are developing a Public Education and Engagement Plan (PEEP) to share resources, ideas, experiences, and expertise in connecting people with the places and spaces around them.

This partnership will support the work we already do to help all ages personally connect with the Bays. Those who work in the environmental field or support organizations like the Center likely had some personal experience with the outdoors, whether along the Bays or in another part of the world. If you can recall that memory—the first time you really, truly engaged with nature—then you know the importance of making impactful connections with

Homeschool students learn about key adaptations of animals commonly found in the maritime forest.

nature possible for all ages, abilities, and backgrounds. The CCMP will guide us to do so more successfully, as we soon will at the James Farm Ecological Preserve thanks to the Lessons in Nature Capital Campaign.

The updated CCMP has provided a roadmap for addressing the education gaps that need to be filled as more and more people move to Sussex County, as well as the challenges we all face due to climate change.

It's also important for the Center to play a role in connecting property owners, residents, and businesses with the resources they need to sustainably live along these waterways, as well as working with decision-makers at all levels so that they can embrace the importance of being, and inspiring, stewards of the Bays. Engaging with local restaurants helps fuel our *Don't Chuck Your Shuck* oyster shell recycling program and related restoration work, and we cannot wait to grow our partnerships and relationships more in the coming years.

The Center and Maryland Coastal Bays Program teamed up to host "Journey Up the Coast—An In-Person Exploration of the Inland and Coastal Bays" youth program at the Preserve in June 2021.

"Interactions with the natural world help to build meaningful connections with the places we call home," said Lisa Swanger, the Center's Outreach & Education Coordinator. "This expands the breadth and depth of environmental awareness and inspires individuals to protect what they know and appreciate."

Donor Spotlight:
Richard Mais Showcases the Importance of Connections

Richard Mais got on board with the Bays because he realized the Center has an incredibly important role to play in our communities' future.

Growing up in Kansas City, Missouri, his family would vacation at a cabin in the Ozarks, where they would go fishing, swimming, and wander the woods. That love of engaging with the outdoors has stuck with him, and his deep appreciation now extends to the Inland Bays. He has been a major donor to the Center for about four years, in particular supporting the Center's Lessons in Nature Capital Campaign to implement the James Farm Master Plan.

"I've always enjoyed the time I spent on the Bays, and I want to do what I can to help keep the water clean and keep this a viable natural area that future generations could enjoy," he said.

Richard settled in Fenwick Island with his wife, Rebecca, and their months-old son in 1986. They took over management of a few family properties, built a home, and launched McCabe's Gourmet Market in South Bethany. Eventually, he found himself on the Fenwick Island Town Council and then the Sussex County Association of Towns.

Then, in 2017, a board seat at the Center opened up and Richard stepped in to serve the Bays the following year, as the new CCMP was being developed.

"There are a lot of people that have influences on the health of the Bays and the cleanliness of our waterways, and this management plan brings all of those various groups together," he said. "We're all kind of in the same boat, so to speak."

From sea-level rise to stormwater to habitat loss, every community in and around the Bays faces challenges. But Richard said he's been impressed by the Center's ability to be a cheerleader for the estuary.

"We need to protect our Inland Bays," he said. "It helps to have a long-range plan so you can take small steps and anticipate important changes like sea-level rise."

Richard is now retired and no longer in public office, but continues to support the Center through his donations and by serving on its Development Committee, which aims to raise funding for the science, restoration, and educational work around the Bays.

Top photo: Richard Mais and his wife, Rebecca. Photo courtesy of Richard Mais.

Bottom photo: Richard Mais shows his support for the Bays during this year's Decked Out. Photo by Matt Sprague.

"It's important that it starts with the children," Richard said of stewardship. "Being outdoors is something I always enjoyed and that has carried through the years. Now I'm proud to be part of a group that offers those kinds of activities and educates all ages as to why these places are important and in need of protection."

DELAWARE CENTER FOR THE
INLAND BAYS
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CIB MISSION

To preserve, protect and restore Delaware's Inland Bays and their watershed.

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Signatories (seated) sign the revised CCMP at a press event on November 19, 2021, at Hyatt Place Dewey Beach. They are joined by Center staff and Board members (standing) along with event speakers Catherine Libertz with Environmental Protection Agency Region 3, U.S. Senator Tom Carper, and State Representative Ronald Gray. Photo by Chris Flood/ Cape Gazette.